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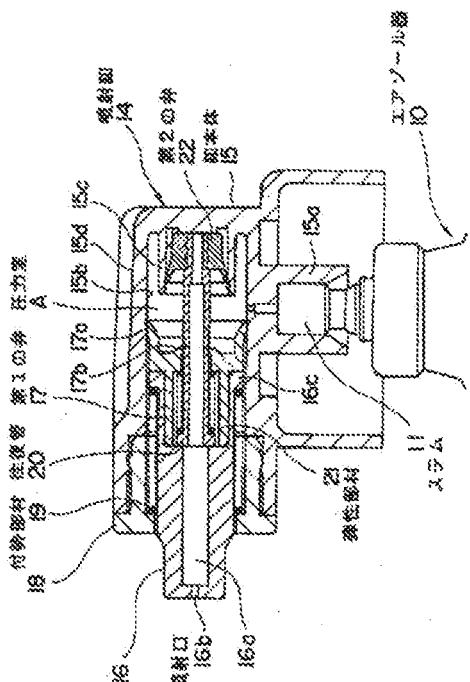
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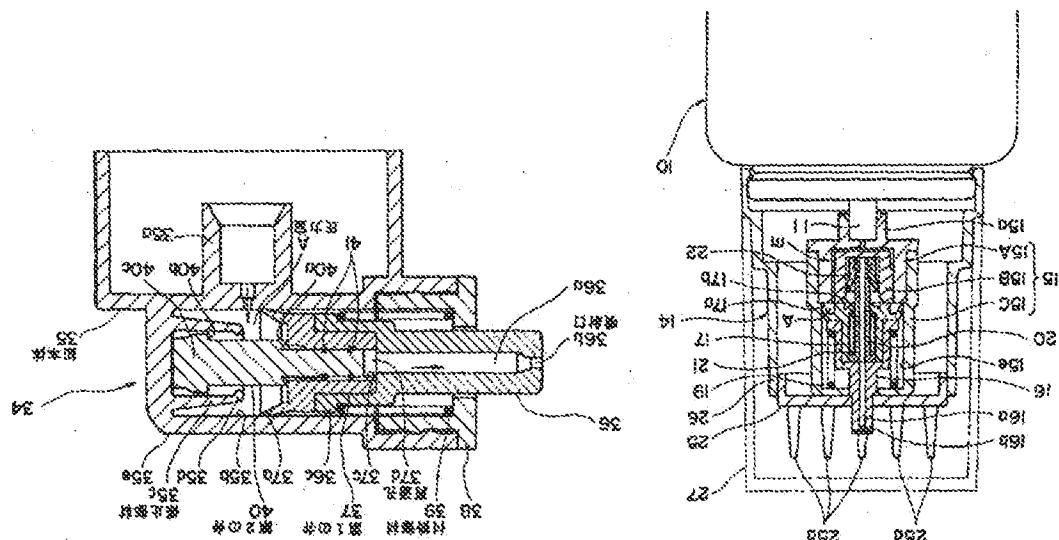
(5) 【発明の名稱】 バイブレーション検針器

(57)【要約】

【課題】 耐久性を向上し、明確な間欠噴射を得ることができるようにする。

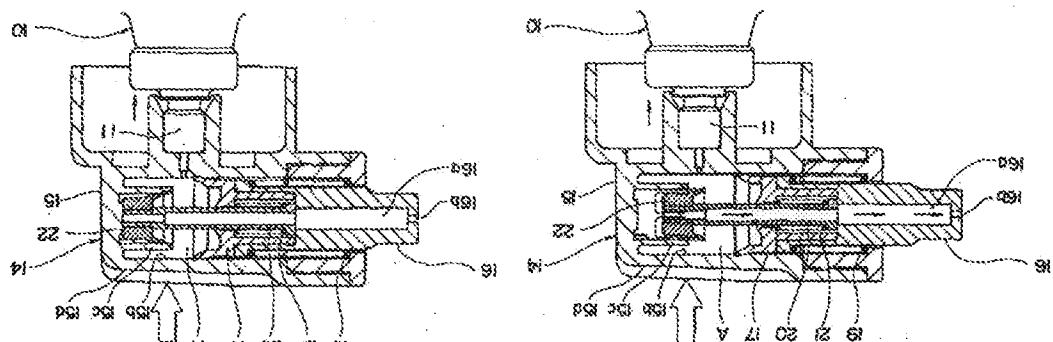
【解決手段】 使用時、指掛け部15dに指を掛けて釦本体15を押し下げ、ステム11を押し込んでエアゾーラー器10内の内容物をステム11から噴出し、釦本体15の圧力室A内に入る。そして、その圧力室A内の圧力上昇にともない、付勢部材19に抗して第1の弁17を摺動して圧力室A内の容積を増大する一方、その第1の弁17とともに往復管20を介してとともに第2の弁22を移動し、その第2の弁22を所定量以上移動するととき、釦本体15に対する該第2の弁22の押し当てを解除して圧力室Aと往復管20内とを連通し、圧力室A内の内容物を往復管20内を通して噴射口16bから噴射する。





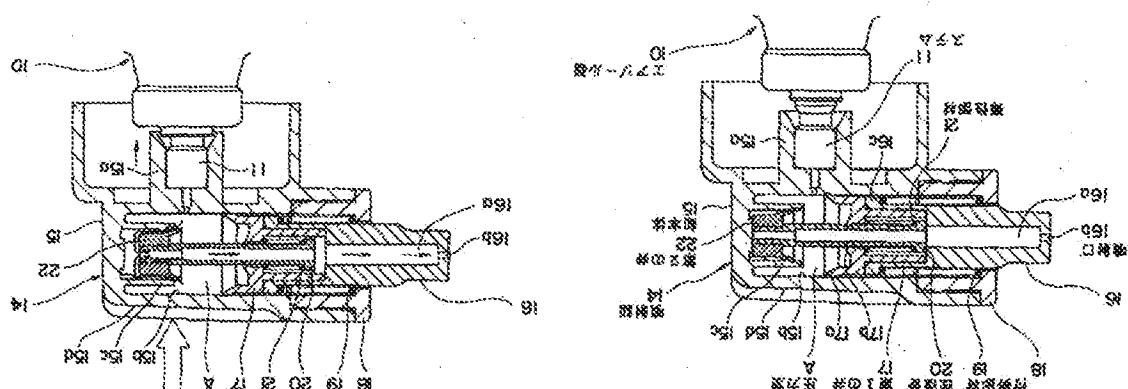
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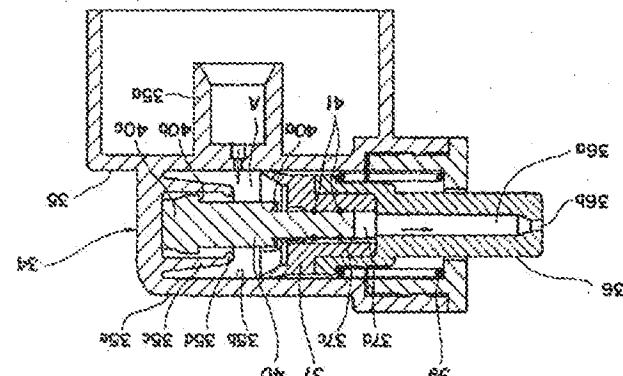
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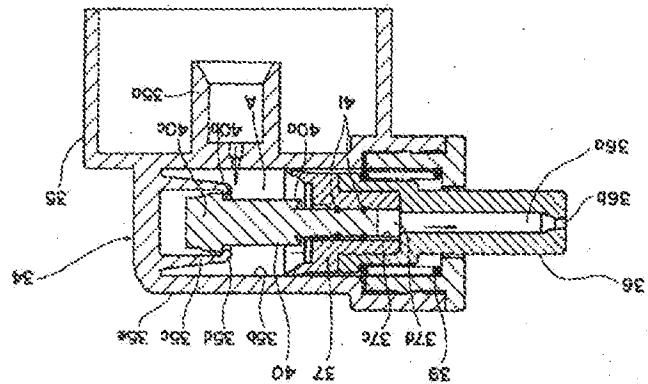


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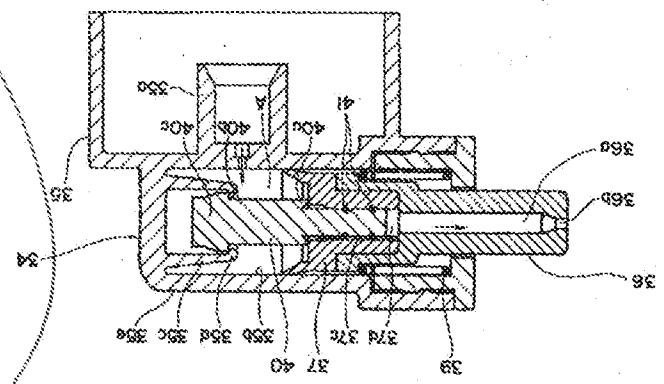
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[68]



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Convened registration

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Environnement, ressources et énergie

LEGAL STATUS

SOLUTION: At use, a push button body 15 is pressed down by hooking a finger on a finger-hock section 15d to press stem 11. A substance within an aerosol container 10 is sprayed out of the stem 11 into a pressure chamber A of the push button body 15. Corresponding with a pressure increase within the pressure chamber A, a first valve 17 is slid to a presssing member 19 to increase a volume within the pressure chamber A and to move a second valve 212 through a reciprocating pipe 20 together with the first valve 17. When the second valve 22 is moved over predetermined volume, a pushing contact of the second valve 22 to the button main body 15 is released to allow the pressure chamber A to communicate with an interior of the reciprocating pipe 20 and to spray the substance within the pressure chamber A through the reciprocating pipe 20 from a spray outlet 16b.

PROBLEM TO BE SOLVED: To improve durability and to obtain clear-

cut insecticide spray.

(57) Abstract:

103 THE USE OF THE TIBETAN

(4) VIBRATION SMALL FLUID BOTTLE

(54) VIBRATION SPRAY PUSH BUTTON

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PATENT ABSTRACTS OF JAPAN

[Translation done.]

[Claim 1] The main body of button which attaches in the stem of an aerosol machine and is prepared possible which puts an inner edge into said pressure interior of a room while penetrating the 1st valve and turning an outer edge to an infection tip. The 2nd valve which opens and closes, and opens said pressure room for free passage in the both-way tubeing, or intercepts the free passage when attaching in the both-way tubeing, preparing in said pressure interior a room and moving with said both-way tubeing with sliding of said 1st valve. When the pressure of said pressure interior of a room rises by the contents of said aerosol machine which blows off from said stem, Resist the energization member which cancels the push reliance to said main body of button, energizes said 1st valve possible body of button, and intercepts said free passage of a pressure room and the inside of said both-way tubeing.

[Claim 2] Vibration ***** according to claim 1 which comes to intervene in an elastic member between said main body of button, and the inside of both-way tubeing.

[Claim 3] The main body of button which attaches in the stem of an aerosol machine and is prepared possible [depression] The 1st valve which divides the pressure room containing the contents of said aerosol machine with which prepares free [sliding] in the main body of button, and blows off from said stem, The 2nd valve which intrudes with which attaches [sliding] in the 1st valve, and is prepared in said pressure interior of a room, The 2nd valve which intrudes with which attaches [sliding] in the 1st valve, and closes said stem through tube.

[Claim 4] Vibration ***** according to claim 3 which really comes to build said stop member to said main body of the 2nd valve, separates this 2nd valve from said 1st valve, and opens said through tube.

CLAIMS

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* NOTICES *

[0002] Description of the Prior Art] In this kind of vibration *********, conventionally. When it depresses and a stem is pushed into the main body of button. If a valve is closed with the fall of the pressure interior of a room. pressure of the pressure interior of a room rises after that while opening the valve of this pressure interior of a room. with the use of a pressure and injecting from an injection tip. Contents are infected again, when it falls, injection is interrupted again and there are some which carry out intermittent injection of the contents from an injection tip by this repeat. [0003] However, in this kind of *********, since the valve was immediately opened with the use of the pressure of the pressure interior of a room and the valve was immediately closed with injection, sufficient clear intermittent injection for the message effectiveness to be expected was not able to be acquired.

[0004] For this reason, in the conventional vibration *********, For example, as shown in drawing 10, when it attaches in the stem 2 of the aerosol machine 1, it depresses and a stem 2 is pushed in. The contents in the aerosol machine 1 spouted from a stem 2 are put in in the pressure room of a main body of button 3, and it slides leeward in drawing.

[0005] compressing the first energy member 5 for the valve 4 through the resistance ring 6 while compressing the second energy member 8. [0006] And when the energy member 8 exceeds the frictional force of the valve 4, the valve 7 was returned, between the first valve 4 was opened, and the contents in the pressure resistance ring 6, the valve 7 was opened again, contents were injected by the fall of the pressure interior of a room, it slides on the valve 7 is again interrupted again and the pressure room of a main body of button 3, and the valve 7 is again returned with friction in this valve 4 through the resistance ring 6. And when the pressure in the pressure room of a main body of button 3, and the valve 7 is again interrupted again and the pressure room of a main body of button 3, and the valve 7 is again returned with friction in this valve 4 through the resistance ring 6. [0007] [Problem(s) to be Solved by the Invention] however, to such vibration *********, From repeating penetration and the extraction of the Znd valve 7 to the 1st valve 4 through the resistance ring 6 at the time of use ***** produces wear and it becomes impossible to acquire clear intermittent injection soon between the 1st valve 4 and the resistance link 6, since opening valve 7 is opened by the energy member 8 was needed with the 1st energy member 5, which cannot perform valve- opening action stability -- since the Znd energy member 8 is becoming cost quantity, occurred.

[0008] Then, in vibration *********, which was mentioned above, invention given in claims 1 and 2 improves endurance, and aims at enabling it to acquire clear intermittent injection. While invention of a publication enables it to perform

[Detailed Description of the Invention]

DETAILED DESCRIPTION

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* NOTICES *

characterized by the thing it comes to have stop member 33c which opens 3/d or said tongue webs. [0016] And in this invention according to claim 3, at the time of use, depress a main body of button 35 and a stem 11 is pushed in. Blow off from this stem 11 and the contents in the aerosol machine 10 are put in in the pressure room A main body of button 35. While resisting the energization member 39 with the rise of the pressure in the pressure room A, sliding on the 1st valve 37 and increasing the volume in the pressure room A, when moving the 2nd valve 40 more

pressure room A containing the contents of said aerosol machine 10 which prepares free [sliding] in the main body of button 35, and blocks off from said stem 11. The 2nd valve 40 which intrudes with friction in 37d of through tubes of the 1st valve 37, and is prepared in said pressure room A. The energization member 39 which energizes said 1st valve 37, pressure againts this 2nd valve 40, and closes 37d of said through tubes. The pressure in said pressure room A rises by the contents of said aerosol machine 10 which blocks off from said stem 11. When resisting said energization member 39, sliding on said 1st valve 37 and moving said 2nd valve 40 more than the specified quantity with the 1st valve 37, it hangs and stops to the 2nd valve 40, this 2nd valve 40 is separated from said 1st valve 37, and it is separated by the 2nd valve 40 which opens 37d of said through tubes.

[0015] The passage of the gearshift of the operation which explains invention according to claim 3 in vibration *****
using the following drawing 6 thru/or drawing 9. The main body of button 35 which attaches in the stem 11 of the
aerosol machine 10, and is prepared possible [depression] with the stem 11. The last valve 37 which divides the

pressure room A, an elastic member 21 is compressed, the Znd valve 22 is moved behind the both-way valve 20, the pusher 20 is moved to a main body of button 15 is canceled soon, and the pressure room A and the inside of the both-way valve 20 are opened for free passage behind time.

between said 1st valve 17 and said both-way valve 20 in vibration ***** according to claim 1 as the gestalt of the better part of the invention according to claim 2, when the 1st valve 17 slides with the rise of the pressure in the [0014] And in this invention according to claim 2, when the 1st valve 17 slides with the rise of the pressure in the operation explained using the following drawing 1, having drawing 2.

interrupted again and intermittent infection of the contents in the pressure room A will be carried out from injection-tub 16b by this repeat. [0013] Invention according to claim 2 is characterized by the thing it comes to intervene in an elastic member 21

retained by the energization force of the energization number 19, the 2nd valve 22 will be pressed against a main body of button 15, the free passage of the pressure room A and the inside of the both-way tubing 20 will be interrupted, and injection of contents will be interrupted.

[0010] And in this invention according to claim 1, at the time of use, depress a main body of button 15 and a stem 11 is pushed in. Blow off from this stem 11 and the contents in the aerosol machine 10 are put in in the pressure room A of a main body of button 15. While resisting the energization member 19 with the use of the pressure in the pressure room A, sliding on the stem 11 and increasing the volume in the pressure room A. When moving the 22 both through the both-way tubing 20 with the 1st valve 17 and moving the 2nd valve 22 more than the specified quantity, through the both-way tubing 20 with the 1st valve 17 and moving the 2nd valve 22 more than the specified quantity, The push resistance of this 2nd valve 22 to a main body of button 15 is canceled, the pressure room A are injected from the both-way tubing 20 are opened for free passage, and the contents in the pressure room A are injected from injection-dp 16b through the inside of the both-way tubing 20.

Variae 1., and said 2nd and 3rd article 22 is moved with the 1st article 1. The power remanence to said main body of Union 13 is canceled. Possible [said free passage of the pressure room A and the inside of said both-way tube 20] Said 1st valve energized, said 2nd valve 2 is pressed against main body of button 15, and it is characterized by the thing it comes to have the energization member 19 which intercepts said free passage of the pressure room A and the inside of said both-way tube 20.

The 2nd valve 22 which opens and closes, and opens said pressure room A for free passage in the both-way tubing 20, or intercepts the free passage when attaching in the both-way tubing 20, preparing in said pressure room A and moving with said both-way tubing 20 with sliding of said 1st valve 17. When the pressure in said pressure room A rises by the contents of said aerosol machine 10 which blows off from said stem 11, Resist the energization force, slide on said 1st valve 17 and said 2nd valve 22 to move with the 1st valve 17. The push release to said valve 17 is

valve 17 which divides the pressure room A containing the contents of said aerosol machine 10 which prepares free (sliding) in the main body of button 15, and blows off from said stem 11. The both-way tubing 20 which puts in an inner edge in said pressure room A while penetrating the last valve 17 and turning an outer edge to infection-tip 16b,

[Means for Solving the Problem] Therefore, invention according to claim 1 is set to vibration *****. For example, the main body of button 15 which attaches in the stem 11 of the aerosol machine 10, and is prepared possible [depression] with the stem 11 as the gasket of the operation explained using the following drawing 5, The 1st

value-opening auction is claims 3 and 4 today, it aims at reducing components mark and aiming at a cost cut.

[0029] With the rise of the pressure, the energization member 19 is resisted, it slides on the 1st valve 17, and the volume in the pressure room A is increased. Although an elastic member 21 is compressed with sliding of that 1st valve 17 in the beginning at this time, when the elastic force of that elastic member 21 became large, the both-way urging 20 is moved with the 1st valve 17, the 2nd valve 22 also moves [both] and specified quantity migration of that 2nd valve

A finger is hung on 1st of fingerplate sections, a main body of button 15 is depressed, and a stem 11 is pushed in in the aerosol machine 10. Then, the contents in the container 15 are pushed below off from this stem 11, enter in the pressure room A of a main body of button 15, and go up the pressure in the pressure room A.

room A and the inside of the both-way tubing 20.

[0027] Now, the 2nd valve 22 is attached in the inner edge of the both-way tubing 20 in the pressure room A, and it contains in said tube projected part 15c. And the 2nd valve 22 is pressed against a main body of button 15 by the energization force of said energization member 19, and it always comes to intercep the free passage of the pressure

[0025] On the other hand, the both-way tube 20 is penetrated and formed in a core at the 1st valve 17. The both-way tube 20 puts in an inner edge in the pressure room. A white tubing an outer edge to insertion tip 16b. And the elastic tube 20 puts in an inner edge in the pressure room. A white tubing an outer edge to insertion tip 16b. And the elastic member 21 of the shape of a coil spring prepared in an outer edge penetrates is intervened between the 1st valve 17 and the both-way tube 20, the outer edge of the both-way tube 20 is always applied to a piston 16, and the inside of the both-way tube 20 is opened for free passage to infection-in the left thoracic main hole 16a.

comes to join the proceeded piston part of cavity hole 13c in the inner part of cavity hole 13b towards the direction to open [0024] into such cavity hole 13b, it connects with a piston 16, the last valve 17 is formed free [sliding], and the pressure room A which is open for free passage in a main body of button 15 in said stem fitting section 15a is divided. It comes to prepare injection tip 16b of this *****. 14 in a piston 16 at the point of main hole 16a. And the coil-spring-like energization member 19 is formed between inner edge range 16c of a piston 16, and the fixed bush 18, and the last valve 17 is energized to the inner sense with a piston 16 by the energization member 19. It comes to attach the fixed bush 18 in the inner part of cavity hole 13b by press fit.

[0023] The main body of button 15 is really built with shaping using the resin ingredient is formed in ***** 14, While preparing downward stem fitting section 16 which fits a stem 11 into a core in a main body of button 15, cave hole 15b of the cross-section round shape opened to one side of the direction of a path is prepared in the upper part. And in

lumbodyment of the invention] hereinafter, it explains per gestalt of implementation of this invention, referring to a drawing. The longitudinal section of vibration *** according to claim 1 in the condition of having attached in the stem of an aerosol machine is shown in drawing 1.

[0021] droogtubes, en in die tweede voorbereidende teeltrijp, waarlangs honing en paraffine op die tweede en derde teeltrijp oefenstoppe, stop memer 35e built to a main body of button 35 and one is hung and stopped to the 2nd valve 40 with one shaping.

main body of button 35 and one with shapings for vibration ***** according to claim 3 as the best of the preparation explained using the following drawing 6 duvor drawing 9.

[0019] Invention according to claim 4 is characterized by what it really comes to build said stop member 35 to said 366 by this repeat.

2nd wave 40 will close 3/a of through tubes, and infection of contents will be interrupted. [0018] And if the pressure in the pressure room A rises, contents are infected again, if it fails, infection will be [0018] And if the pressure in the pressure room A rises, contents are infected again, if it fails, infection will be interrupted and limitation of the contents in the pressure room A will be carried out from infection-in

[0017] Then, if the pressure in the pressure room A decreases with inspection, the last valve 37 will be returned by the energization force of the energization member 39, the 2nd valve 40 will be again introduced in 37d of through tubes, this

resisted, the Znd valve 40 is separated from the 1st valve 37, stop member 32 is urging and stopped to this Znd valve 40, which is then the specified quantity, with the 1st valve 37.

[0030] this shows drawing 2 -- as -- between a main body of button 15 and the Znd valve 22 -- a clearance -- building -- drawing 2 Nakaya -- **** -- as -- the clearance -- letting it pass -- the pressure room A and the inside of the both-way tubing 20 -- open for free passage --

[0031] Then, at first, it is pressure room A deckles with injection, as shown in drawing 3, the both-way tubing 20 will be returned and an outer edge will be pressed against a piston 16 by the elastic force of an elastic member 21. Then, it is a pressure deckles further, as shown in drawing 4, the 1st valve 17 and Znd valve 22 are returned, the Znd valve 22 is again put in in tubeled piston 15C, it will press against a main body of button 15, the free

[0032] And when contents are infected again and it falls, as it is shown in drawing 2 and drawing 3, and it is shown in drawing 4, injection is interrupted when the pressure room A is returned a piston 16 by the infection force of the energization member 19.

[0033] Therby, in vibration **** 14 shown in this drawing 1 thru/or drawing 4, the affected part is massaged by the contents in the pressure room A is carried out from injection-rip 16b by this repeat. And while adhering contents of the pressure room A when the pressure room A is returned a piston 16 by the both-way tubing 4, the Znd valve 22 is not immediately opened with the rise of the pressure in this drawing 1 thru/or drawing 4, the Znd valve 22 is not energization member 19, both-way tubing 20, elastic member 21 and valve 22 are attached in the Znd valve 15, and the both-way tubing 20, elastic member 21 and valve 22 are attached in the 1st valve 17, and the 1st valve 17, and upper case 15C is put and constituted on it. Drawing 15 is prepared in the interior, piston 16 and the 1st valve 17, and the Znd energization member 19, both-way tubing 20, elastic member 21 and valve 22 are attached in the Znd valve 15A, and you may make it infect the contents in the aerosol machine 10 from injection-rip 16b straightforwardly as it is.

[0034] As shown, for example in drawing 5, however, a main body of button 15 put in both case 15A, the contents in the aerosol machine 10 were sideways infected from injection-rip 16b.

[0035] By the way, in vibration **** 14 shown in drawing 1 thru/or drawing 4, a main body of button 15 is really improved.

[0036] And when contents are infected again and it falls, as it is shown in drawing 2 and drawing 3, and it is shown in drawing 4, the way shaping using a resin in drawing 1 thru/or drawing 4, a main body of button 15 is shown in drawing 5, however, in vibration **** 14 shown in addition to this, it comes to use the sign used for the part to which **** 14 shown through that slot m. In addition, in addition to this, it comes to use the sign used for the part to which **** 14 shown through 1 thru/or drawing 4 corresponds in this drawing 5 as it is.

[0037] In **** 14 shown in this drawing 5, it changes into tubeled piston 16 and the 1st valve 15B, Slot m is formed outside of this bush 15B, and it is made for the contents of the aerosol machine 10 which below off from the stem 11 to enter in the pressure room A.

[0038] In drawing 5, the newly attached sign 27, the newly attached sign 25 is Mt. Tsunagi which a piston 16 penetrates a core, and is attached and established in a main body of button 15. Much projected part 25a is projected upward in Mt. Tsunagi 25.

[0039] And while cap 27 is removed and have the aerosol machine 10 in reverse, when using it, pressing projected part 25a of Mt. Tsunagi 25 against a head, depressing a main body of button 15, pushing in a stem 11, carrying out 25a of button 15 and is attached in covering 26 at the time of un-using it.

[0040] Now, the longitudinal section of vibration **** according to claim 3 is shown in drawing 6 below. The main body of button 35 really built with shaping using the resin ingredient is formed in illustration **** 34, while preparing downward stem fitting section 35a of the cross-section round shape opened to one side of the direction of a path is prepared in the upper part.

[0041] And in this example of illustration, stop member 35c which projects in tubeled towards the tip of stop member 35c prepared in the inner part of cavity hole 35b at one. It comes to form 35d of stop sections at the tip of stop member 35c, button 35, cavity hole 35b of the cross-section round shape opened to one side of the direction of a path is prepared in room A which is open for free passage in a main body of button 35a at said stem fitting section 35a is divided. It comes to form 35d of stop sections at the tip of stop member 35c, into such cavity hole 35b at one. It comes to form 35d of stop sections at the tip of stop member 35c.

[0042] In this example of illustration, stop member 35c which projects in tubeled towards the tip of a path is prepared in the upper part.

[0054] According to invention according to claim 3, since a stop member is hung on the 2nd valve with the use of the pressure of the pressure interior of a room, the push relevance of the 2nd valve to a stop and the 1st valve is canceled and it opens, valve-opening action can be performed stably, without using an energization member. Moreover, the more be ensured.

[0033] According to invention according to claim 2, an elastic member is compressed with sliding of the last valve, both-way tubing is moved behind time, and since a pressure room and the inside of both-way tubing are delayed and it is open for free passage in addition to the above-mentioned effectiveness by moving the last valve and canceling the push relevance of this last valve to a main body of button soon with the both-way tubing, intermittent infection can much

[Effect of the Invention] Therefore, according to invention according to claim 1, the Z and valve is not immediately opened with the use of the pressure interior of a room, but since it opens after carrying out specified quantity migration, the downtime of infection can be secured certainly and sufficient item is selected for the massive effectiveness to be expected. Moreover, since a resistance ring is not used, the part ready

37d hole edge of through tubes are canceled and it opens, valve-opening actuation can be performed stably, without using an elastic member. Moreover, components mark can be reduced by the ability using an energization member only as the energization member 39, and a cost cut can be aimed at.

[0051] Thereby, in vibration ***** 34 shown in this drawing 6 thru/or drawing 9, since stop member 35 is hung on the 2nd valve 40 with the rise of the pressure in the pressure room A, a stop and the push relevance of seal section 40a to carry out intermittent injection.

[00049] Then, if the pressure in the pressure room A decreases with injection, as the valve 37 is returned by the energization force of the energization member 39 and it is shown in drawing 2, diameter extension section 40 of the 37d hole edge of through tubes will be forced on seal section 40a, 37d of through tubes will be closed, and injection of 2nd valve 40 is pressed in the inner part of valve 3b, the 2nd valve 40 is again inserted in 37d of through tubes.

thick iron will be resisted and the 2nd valve will be pulled out from 37d of through tubes, this shows drawing 8 as -- section 40a -- from the hole edge of 37d of through tubes -- stretching -- 37d of through tubes -- opening -- drawing Nakaya -- ***** -- a passage -- the inside of the pressure room A -- contents are put in in a piston 36 through straight-line slot of 37d of the through tube 37c, and it infests from infection-up 36b through the main hole 36a.

volume in the pressure room A is increased. Since the tip of the 2nd valve 40 is intended with friction droplets resistances ring 41 in 37d of droplets, the 2nd valve 40 is also moves with friction droplets of the 1st valve 37.

With the rise of the pressure, the energization member 39 is resetted, it slides on the 1st valve 37, and the 2nd solenoid member 10, then, the commas in the address machine to blow out the dusts seen 11, enter in the pressure room A of a main body of button 35, and go up the pressure in the pressure room A.

[0043] And the coil-spring-like energization member 39 is formed between the inner edge range 36c of a piston 36, and the fixed bush 38, and the first value 37 is formed between the inner edge range 36c of a piston 36, and the fixed bush 38 in the same manner as the first value 37 is energized to the inner sense with a piston 36 by the energization member 39.

[Translation done.]

JP 11-342202-A [DETAILED DESCRIPTION]

energization member used on the whole can be lessened, components mark can be reduced, and a cost cut can be aimed at. [0055] According to invention according to claim 4, since a stop member is really built to a main body of button and one with shaping, in addition to effectiveness given in above-mentioned claim 3, components mark can be reduced and a cost cut can be aimed at.

[Translation done.]

[Field of the invention] This invention relates to vibration and oscillation of an aerosol machine, for example, is used for the purpose, such as hair styling and cutlery motion. When it depreses and a stem is pushed in in detail, the contents in the aerosol machine which blows off from a stem are intermittently injected up, and while abetting the contents to the affected part, it is related with vibration ***** which messages the affected part by the contents injected intermittently.

TECHNICAL FIELD

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* NOTICES *

[Translation done.]

[Effect of the invention] Therefore, according to invention according to claim 1, the Znd valve is not immediately opened with the rise of the pressure interior of a room, but since it opens after carrying out specific quantity migration, the downtime of injection can be expedited. Moreover, since a resistance ring is not used, the part greatly improves effectiveness to be acquired. Moreover, since a secured certainty and sufficient clear intermittent injection for the passage is moved behind time, and since a pressure room and the inside of both-way tubing are delayed and its open for free passage in addition to the above-mentioned effectiveness by moving the Znd valve and cancelling the both-way tubing is moved behind time, and since a elastic member is compressed with sliding of the 1st valve, is open for free passage in addition to the above-mentioned effectiveness by moving the Znd valve and cancelling the push release of this Znd valve to a main body of button soon with the both-way tubing, intermittent injection can much more be ensured.

[0053] According to invention according to claim 2, an elastic member is compressed with sliding of the 1st valve, pressure of the pressure interior of a room, the push release of the Znd valve to a main body of button and the valve is canceled and its opens, valve-opening action can be performed stably, without using an energization member. Moreover, the energization member used on the whole can be lessened, components mark can be reduced, and a cost cut can be aimed at.

[0054] According to invention according to claim 3, since a stop member is hung on the Znd valve with the rise of the pressure of the pressure interior of a room, the push release of the Znd valve is really built to a main body of button and one with shaping, in addition to effectiveness given in above-mentioned claim 3, components mark can be reduced and a cost cut can be aimed at.

EFFECT OF THE INVENTION

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* NOTICES *

Page 1 of 1

JP.11-342202.A [EFFECT OF THE INVENTION]

MEANS

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* NOTICES *

[0021] Embodiment of the invention] Herewith, it explains per detail of implementation of this invention, referring to a drawing. The longitudinal section of vibration 10 in drawing 1 shows a stem 11 upward. It comes as aerosol machine 10 , containing the liquid has for example, the heat-losses, a circulation factor effect, etc, in this aerosol machine 10 . Vibration 10 is by invention according to claim 1 is attached in the stem 11 of the aerosol machine 10 . The main body of button 15 is really built with shaping using the resin ingredient is formed in ***** 14. While preparing downward stem fitting section $15a$ which fits a stem 11 into a core in a main body of button 15 , cave hole $15b$ of the cross-section round shape opened to one side of the direction of a path is prepared in the upper part. And it comes to form tubebed processed part $15c$ in the inner part of cave hole $15b$ towards the direction to open. [0022] What is shown with the sign 10 in drawing is the aerosol machine which projects a stem 11 upward. It comes as aerosol machine 10 . The main body of button 15 is really built with shaping using the resin ingredient is formed in ***** 14. While preparing downward stem fitting section $15a$ which fits a stem 11 into a core in a main body of button 15 , cave hole $15b$ of the cross-section round shape opened to one side of the direction of a path is prepared in the upper part. And it comes to form tubebed processed part $15c$ in the inner part of cave hole $15b$ towards the direction to open. [0023] The main body of button 15 is really built with shaping using the resin ingredient is formed in ***** 14. While room A which is open for free passage with a piston 16 , the 15 is formed free [sliding], and the pressure member 21 of the pressure room A while timing an outer edge to injection-up $16b$. And the both-way tubeing 20 in an inner edge in the pressure room A is penetrated and formed in a core at the last value 17 . The both-way tubeing 20 on the other hand, the both-way tubeing 20 is opened for free passage to meshed-up $16b$ through main hole $16a$. [0024] In the both-way tubeing 20 , the outer edge of the both-way tubeing 20 is always applied to a piston 16 , and the inside of the both-way tubeing 20 is in shape of a coil spring prepared in an outer edge periphery is intervened between the last value 17 and member 21 of the pressure room A while timing an outer edge to injection-up $16b$. And the elastic tubeing 20 puts in an inner edge in the pressure room A while timing an outer edge to injection-up $16b$. [0025] On the other hand, the both-way tubeing 20 is meshed-up $16b$ through main hole $16a$. [0026] In addition, outward elastic section $17a$ and inside elastic section $17b$ are prepared in the last value 17 , and outward elastic section $17a$ the inner circumference of cave hole $15b$ presssing -- inner sense elastic section $17b$ -- densely. [0027] Now, the 2 nd valve 22 is attached in the inner edge of the both-way tubeing 20 in the pressure room A , and it contains in said tubebed processed part $15c$. And the 2 nd valve 22 is pressed against a main body of button 15 by the density.

the 1st valve 37, it hangs and stops to the 2nd valve 40, this 2nd valve 40 is separated from said 1st valve 37, the 2nd valve 40 more than the specified quantity which is 39, sliding on said aerosol machine 10 which blows off from said 11, When resisting said pressurized member 39, the contents of said aerosol machine 10 which hangs said 11, The pressure in said pressurized room A rises 37, presses against this 2nd valve 40, and closes 37 of said through tubes, The pressure in said pressurized room A rises 37, presses against this 2nd valve 40, and is prepared in said pressurized room A, The energization member 39 which energizes said 1st valve 37, it hangs and stops to the 2nd valve 40 more than the specified quantity which is 39, characterized by the thing it comes to have stop member 35c which opens 37d of said through tubes, [0016] And in this invention according to claim 3, at the time of use, depress a main body of button 35 and a stem 11 is pushed in, Blow off from this stem 11 and the contents in the aerosol machine 10 are put in in the pressurized room A of a main body of button 35, While resisting the energization member 39 with the rise of the pressure in the pressurized room A, sliding on the 1st valve 37 and increasing the volume in the pressurized room A, when moving the 2nd valve 40 more than the specified quantity which is 37, Stop member 35c is hung and stopped to this 2nd valve 40, if it is resisted, the 2nd valve 40 is separated from the 1st valve 37, 37d of through tube 36b is opened, and the contents in the pressurized room A are injected from the 2nd valve 40 into the through tube 36b through tube 37d of the through tube, [0017] Then, if the pressure in the pressurized room A decreases with injection, the 1st valve 37 will be returned by the energization force of the energization member 39, the 2nd valve 40 will be again inundated in 37d of through tubes, this 2nd valve 40 will close 37d of through tubes, and injection of contents will be interrupted, [0018] And if the pressure in the pressurized room A rises, contents are injected again, if it fails, injection will be interrupted again and intermittent injection of the contents in the pressurized room A will be carried out from injection tip 36b by this repeat, [0019] Invention according to claim 4 is characterized by what it really comes to build said stop member 35c to said main body of button 35 and one with shaping for vibration ***** according to claim 3 is the result of the preparation explained using the following drawing 6 drawing 9.

carry out intermittent infection.

interruption of the contents in the aerosol machine 10 from infection-dp 16b like the case where it is shown in drawing 25 against a head, depressing a main body of button 15, pushing in a stem 11, carrying out 23a of Mt. Tsunagi 25 is removed and have the aerosol machine 10 in reverse, when using it, pressing projected part [0039] And while cap 27 is removed in coverings 26 at the time of unusing it.

***** 14 and is attached in coverings 26 at the time of unusing it. Tsunagi 25, and attaches and prepares the lower part in the aerosol machine 10. A sign 27 is a cap which puts on A sign 26 is covering of the shape of a cylinder which covers the surroundings of a main body of button 15 or Mt. established in a main body of button 15. Much projected part 23a is projected and prepared upward in Mt. Tsunagi 25. [0038] In drawing 2, the newly attached sign 25 penetration 16 penetrates a core, and is attached and in drawing 1 thru/or drawing 4 corresponds in this drawing 2 as it is.

through that slot m. In addition, in addition to this, it comes to use the sign used for the part to which ***** 14 shown made for the contents of the aerosol machine 10 which below off from the stem 11 to enter in the pressure room A

***** 14 shown in this drawing 4, and the 2nd valve 22 is put in in bush 15B. Slot m is formed outside at this bush 15B, and it is [0037] in ***** 14 changes into tubed projected part 15c of ***** 14 shown in drawing 5, it changes into tubed projected part 15c of ***** 14 shown in drawing 4, and you may make it infect the contents in the aerosol machine 10 from infection-dp 16b stability as it is.

and the 2nd energization member 19, both-way tubing 20, elastic member 21 and valve 22 are attached in the dugout and upper case 15C is put and constituted on it. Drawing 15c is prepared in the interior, piston 16 and the 1st valve 17, and you may make it infect the contents in the aerosol machine 10 from infection-dp 16b stability as it is. [0036] As shown, for example in drawing 5, however, a main body of button 15 Put in bush 15B in bottom case 15A, the contents in the aerosol machine 10 were sideways infected from infection-dp 16b.

***** 14 shown in drawing 1 thru/or drawing 4, a main body of button 15 is really improved. [0035] By the way, in vibration ***** 14 shown in drawing 1 thru/or drawing 4, a main body of button 15 is really improved with shaping using a resin integradent, cavity hole 15b is prepared in it, piston 16 and the 1st valve 17, and the 2nd energization member 19, both-way tubing 20, elastic member 21 and valve 22 are attached in the cavity hole 15b, and the contents in the aerosol machine 10 were sideways infected from infection-dp 16b.

[0034] Moreover, since a resistance ring is not used, the part greatly worn out can be lost and endurance can be guaranteed effectively to be expected.

[0033] Thereby, in vibration ***** 14 shown in this drawing 1 thru/or drawing 4, the 2nd valve 22 is not immediately opened with the rise of the drawing 1 thru/or drawing 4, the 2nd valve 22 is not quantity migration, the downtime of infection can be secured certainly and sufficient clear intermittent infection for the quantity migration, the downtime of infection can be secured certainly and sufficient clear carrying out specified

[0032] And when contents are infected again and it falls, as it is shown in drawing 2 and drawing 3, and it is shown in drawing 4, infection is interrupted when the pressure in the pressure room A is released, [again, and intermittent infection of the affected part, the affected part is massaged by the contents which carry out intermittent infection.

[0031] Then, at first, if the pressure in the pressure room A is released again and it falls, as it is shown in drawing 2 and drawing 3, the both-way tubing 20 will be interrupted for the energization force of the energization member 19. [0030] This shows drawing 2 Nakaya ***** as -- the contents in the pressure room A and the inside of the both-way tubing 20 will be interrupted for the energization force of the energization member 21. Then, if a pressure deckin further, as shown in drawing 4, the 1st valve 17 and 2nd valve 22 are released, way tubing 20 will be returned and an outer edge will be pressed against a piston 16 by the elastic force of an elastic member 21, infection is interrupted when the pressure in the pressure room A is released again and it falls, as it is shown in drawing 2 and drawing 3, the both-

[0029] With the rise of the pressure, the energization member 19 is resisted, it slides on the 1st valve 17, and the passage of the pressure room A and the inside of the both-way tubing 20 will be interrupted, and infection of contents to the affected part is massaged by the contents which carry out intermittent infection.

[0028] And at the time of use, it has the aerosol machine 10 by hand, and go up the pressure in the pressure room A of a main body of button 15, and go up the pressure in the pressure room A. [0027] In the beginning at this time, when the elastic force of that elastic member 21 became large, the both-way tubing 20 is moved with the 1st valve 17, the 2nd valve 22 also moves [both] and specified quantity migration of that 2nd valve 22 is carried out soon, the push resistance of this 2nd valve 22 to a main body of button 15 is canceled.

[0026] With the rise of the pressure, the energization member 19 is resisted, it slides on the 1st valve 17, and the clearace -- letting it pass -- as -- between a main body of button 15 and the 2nd valve 22 -- a clearace -- building -- drawing 2 Nakaya ***** as -- the pressure room A and the inside of the both-way tubing 20 -- open for free passage -- drawing 2 Nakaya ***** as -- the contents in the pressure room A are put in in the both-way tubing 20, and it

[0025] And when contents are infected again and it falls, as it is shown in drawing 2 and drawing 3, the both-way tubing 20 will be interrupted for the energization force of the energization member 19. [0024] This shows drawing 2 Nakaya ***** as -- the contents in the pressure room A and the inside of the both-way tubing 20 will be interrupted for the energization force of the energization member 21. Then, if a pressure deckin further, as shown in drawing 4, the 1st valve 17 and 2nd valve 22 are released, way tubing 20 will be returned and an outer edge will be pressed against a piston 16 by the elastic force of an elastic member 21, infection is interrupted when the pressure in the pressure room A is released again and it falls, as it is shown in drawing 2 and drawing 3, the both-

[0023] Then, at first, if the pressure in the pressure room A is released again and it falls, as it is shown in drawing 2 and drawing 3, the both-way tubing 20.

[0022] And the inside of said energization member 19, and it always comes to intercept the free passage of the pressure room A and the inside of the both-way tubing 20.

energization force of said energization member 19, and it always comes to intercept the free passage of the pressure

(0051) Thereby, in vibration ***** 34 shown in this drawing 6 during drawing 9, since stop member 35c is hung on the Znd valve 40 with the rise of the pressure in the pressure room A, a stop and the push resistance of seal section 40a to 3d hole valve 40 through tubes are canceled and it opens, valve-opening section can be performed stably, without using an elastic member. Moreover, components mark can be reduced by the ability using an energization member only as the energization member 39, and a cost cut can be aimed at.

[0050] And if the pressure in the pressure room A rises again, contents are infected again, if it fails, infection will be interrupted again and intermittent infection of the contents in the pressure room A will be carried out from injection-hub 36b by this repeat. And while injecting contents to the affected part, the affected part is massaged by the contents which

[0049] Then, if the pressure in the pressure room A decreases with infection, as the last valve 3 / is retummed by the energization force of the energization member 39 and it is shown in drawing 9, diameter expansion section 40c of the valve 40 is pressed in the inner part of valve 3b, the 2nd valve 40 is again inturded in 37d of through tubes 2 and 37d hole edge of through tubes will be forced on seal section 40a, 37d of through tubes will be closed, and infection of

triction will be resisted and the 2nd valve will be pulled out from 37d of through tubes, this shows drawing 8 - as - seal section 40a - from the hole edge of 37d of through tubes - detaching - 37d of through tubes - as - drawing Nakaya - ***** - a passage - the inside of the pressure room A - contents are put in in a piston 36 through straight-line slot of 37d of the through tube 37c, and it infests from misfection - by 36b through the main hole 36a.

volume in the pressure room A is increased. Since the tip of the Znd valve 40 is inundated with friction through the resistance ring 41 in 37d of through tubes, the Znd valve 40 also moves with migration of the 1st valve 37.

a finger is hung on hinge section 35e, a main body of button 35 is depressed, and a stem 11 is pushed in in the aerosol machine 10. Then, the contents in the aerosol machine 10 blow off from this stem 11, enter in the pressure room A of a main body of button 35, and go up the pressure in the pressure room A.

(0045) It inserts in two peripheral slots on the tip respectively, the resistive ring 41 is formed in the 2nd valve 40, seal section 40a is formed in it on the way, and it comes to form in it diameter expansion section 40c which prepares step 40b in a end face, and enters in stop member 35c, and the energization force of the energization member 39 which energizes the 1st valve 37 to the inner sense with a piston 36 -- diameter expansion section 40c of the 2nd valve 40 -- the back of cave hole 35b -- pressing -- 37d hole edge of through tubes -- seal section 40a -- pushing -- 37d of through tubes -- closing -- the inside of the pressure room A -- liquid -- it comes to hold densely

(0044) On the other hand, outward elastic section 37a is prepared in the 1st valve 37, and 37d of through tubes which have straight-line slot 37c in the core is prepared in it. And outward elastic section 37a is passed against the inner circumference of a narrow tube 35b, and it comes to inturde in 37d of through tubes with friction in the tip of the 2nd valve 40 of the shape of a needle established in the pressure room A.

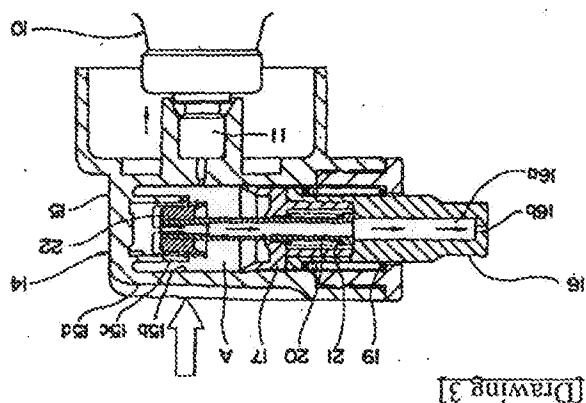
to prepare inspection-up $\Sigma 360$ of this ***** 34 in a piston 36 at the point of main hole 36a. [0043] And the coil-spring-like energization member 39 is formed between edge 36c of a piston 36, and the fixed bush 38, and the last value 37 is energized to the inner sense with a piston 36 by the energization member 39. It comes to attach the fixed bush 38 in the inlet port of cavity hole 35b by press fit.

[0041] And in this example of illustration, stop member 35c which projects in tubed towards the direction to open is prepared in the inner part of cave hole 35b at one. It comes to form 35d of stop sections at the tip of stop member 35c. [0042] Into such cave hole 35b, it connects with a piston 36, the last valve 37 is formed free (sliding), and the pressure from a which is open for free passage in main body of piston 35 is said stem fitting section 38 is divided to come

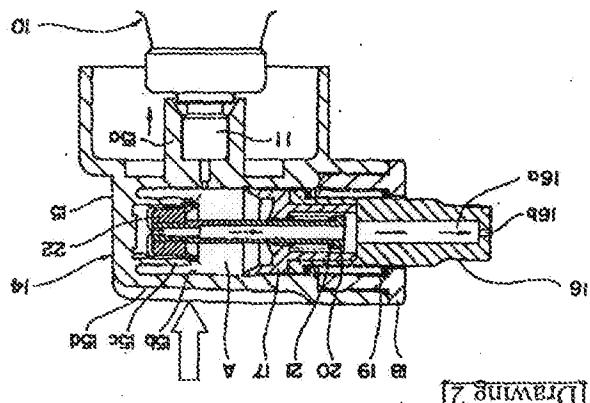
(continued) Now, the following numbered sections of *Alzheimers* according to *Alzheimers* in *Illustration 3* is shown in *Diagram 3* below. The main body of button 35, with *Illustration 3* is shaped using the resin ingested in a cavity of button 35 which is formed in *Illustration 34*. While preparing downward stem fitting section 35a which fits the stem of an aerosol machine into a core in a main body of button 35, a cavity hole 35b of the cross-section round shape opened to one side of the direction of a path is prepared in button 35, according to *Diagram 3*.

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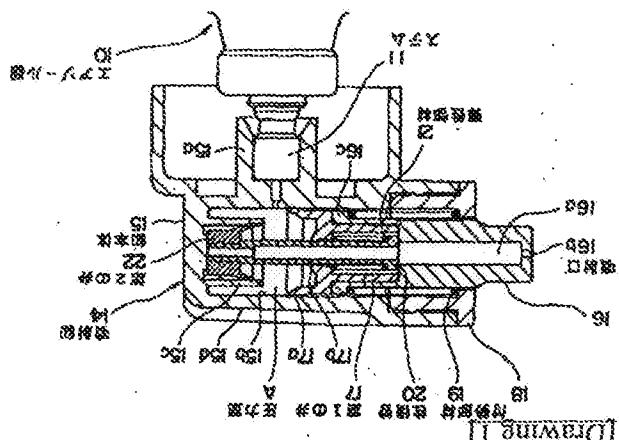
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| [Brief Description of the Drawings] | DESCRIPTION OF DRAWINGS |
| 1) Aerostol Machine 2) Body-way Tubing 3) Elastic Member 4) Step 5) Seal section 6) Stop member 7) Straight-line slot 8) Through tube 9) Step section 10) The 2nd valve 11) Stem 12) Aerostol Machine 13) Main body of button 14) Vibration ***** 15) Tubed projected part 16) Piston 17-37 The 1st valve 16bands6b Insection tip 18-38 Fixed bush 19-39 Energization member 20 Body-way Tubing 21 Elastic Member 22-40 The 2nd valve 35c Stop member 35d Stop section 37c Straight-line slot 37d Through tube 40a Seal section 40c Diameter expansion section 41 Resistance Ring A Pressure room | 1) Drawing [1] It is drawing of longitudinal section of the conventional vibration ***** in the condition of having attached in the stem of an aerostol machine. 2) Drawing [2] It is drawing of longitudinal section at the time of classilum initiation during the use. 3) Drawing [3] It is drawing of longitudinal section at the time of valve-opening initiation during the use. 4) Drawing [4] It is drawing of longitudinal section at the time of classilum during the use. 5) Drawing [5] It is drawing of longitudinal section of vibration ***** according to claim 1 in the condition of having attached in the stem of an aerostol machine. 6) Drawing [6] Drawing of longitudinal section of vibration ***** according to claim 3 is shown. 7) Drawing [7] It is drawing of longitudinal section at the time of valve-opening initiation during the use. 8) Drawing [8] It is drawing of longitudinal section at the time of valve-opening during the use. 9) Drawing [9] It is drawing of longitudinal section at the time of classilum during the use. 10) Drawing [10] It is drawing of longitudinal section of the other examples of vibration ***** according to claim 1 in the condition of having attached in the stem of an aerostol machine. 11) Drawing [11] It is drawing of longitudinal section of vibration ***** according to claim 1 in the condition of having attached in the stem of an aerostol machine. 12) Drawing [12] It is drawing of longitudinal section at the time of valve-opening initiation during the use. 13) Drawing [13] It is drawing of longitudinal section at the time of valve-opening during the use. 14) Drawing [14] Drawing of longitudinal section of vibration ***** according to claim 1 in the condition of having attached in the stem of an aerostol machine. 15) Drawing [15] Main body of button 16) Drawing [16] Piston 17-37 Drawing [17-37] The 1st valve 16bands6b Drawing [16bands6b] Insection tip 18-38 Drawing [18-38] Fixed bush 19-39 Drawing [19-39] Energization member 20) Drawing [20] Body-way Tubing 21) Drawing [21] Elastic Member 22-40 Drawing [22-40] The 2nd valve 35c Drawing [35c] Stop member 35d Drawing [35d] Stop section 37c Drawing [37c] Straight-line slot 37d Drawing [37d] Through tube 40a Drawing [40a] Seal section 40c Drawing [40c] Diameter expansion section 41 Drawing [41] Resistance Ring A Drawing [A] Pressure room |



Drawing 31



[Z. SUMMER]



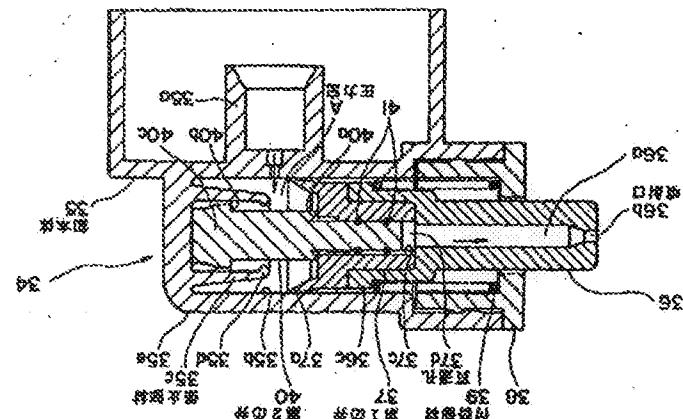
DRAWINGS

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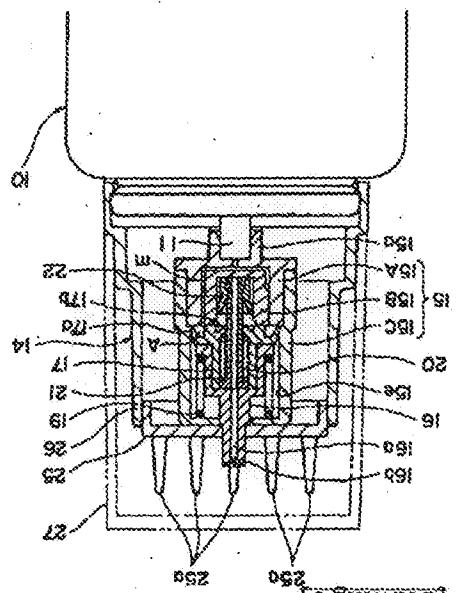
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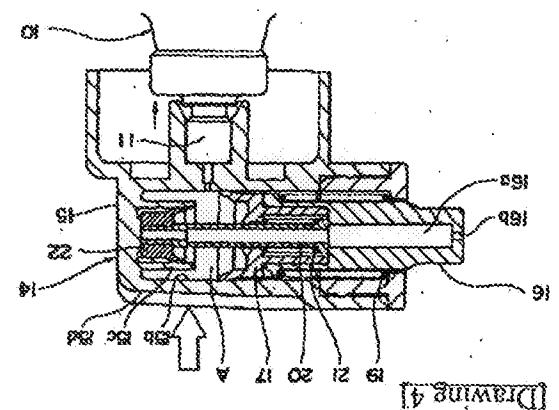
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Drawing 6



Drawing 51



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Diagram

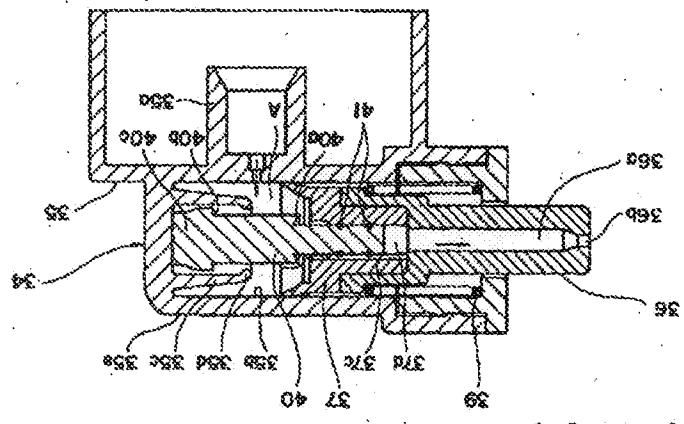
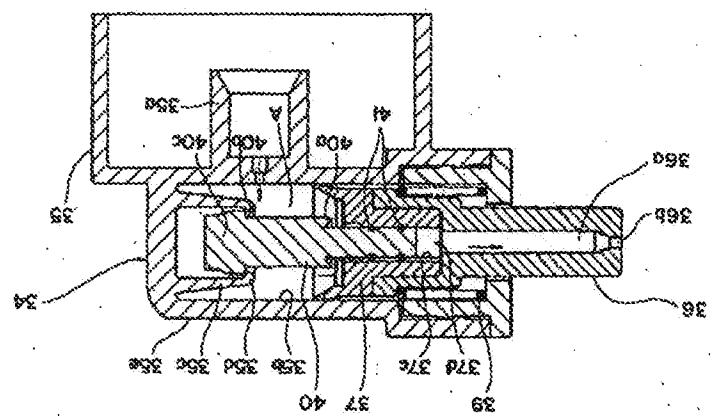
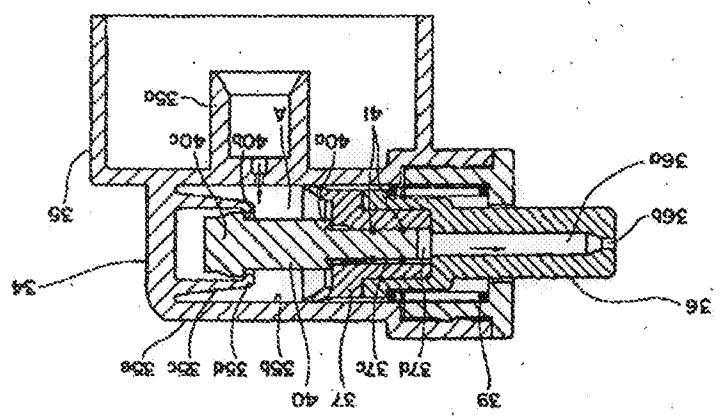


Diagram 9



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Page 3 of 4

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